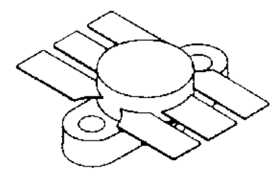
SGS-THOMSON MICROELECTRONICS

SD1458

RF & MICROWAVE TRANSISTORS TV\LINEAR APPLICATIONS

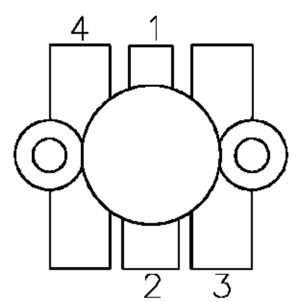
- 170 - 230 MHz
- 28 VOLTS
- IMD –55 dB
- COMMON EMITTER
- GOLD METALLIZATION
- INTERNAL INPUT MATCHING
- HIGH SATURATED POWER CAPABILITY
- DESIGNED FOR HIGH POWER LINEAR OPERATION
- P_{OUT} = 14 W MIN. WITH 14.0 dB GAIN



.500 6LFL (M111)
epoxy sealed

ORDER CODE	BRANDING
SD1458	SD1458

PIN CONNECTION



1. Collector
2. Base
3. Emitter
4. Emitter

DESCRIPTION

The SD1458 is a gold metallized epitaxial silicon NPN planar transistor using diffused emitter ballast resistors for high linearity Class A operation in VHF and band III television transmitters and transposers.

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	35	V
V_{EBO}	Emitter-Base Voltage	4.0	V
I_C	Device Current	10	A
P_{DISS}	Power Dissipation	140	W
T_J	Junction Temperature	+200	°C
T_{STG}	Storage Temperature	– 65 to +150	°C

THERMAL DATA

$R_{TH(j-c)}$	Junction-Case Thermal Resistance	1.5	°C/W

ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CER}	I_C = 50mA	R_{BE} = 10Ω	60	—	—	V
BV_{CEO}	I_C = 50mA	I_B = 0mA	35	—	—	V
BV_{EBO}	I_E = 10mA	I_C = 0mA	4.0	—	—	V
I_{CES}	V_{CE} = 50V	I_E = 0mA	—	—	5	mA
h_{FE}	V_{CE} = 5V	I_C = 1A	10	—	100	—

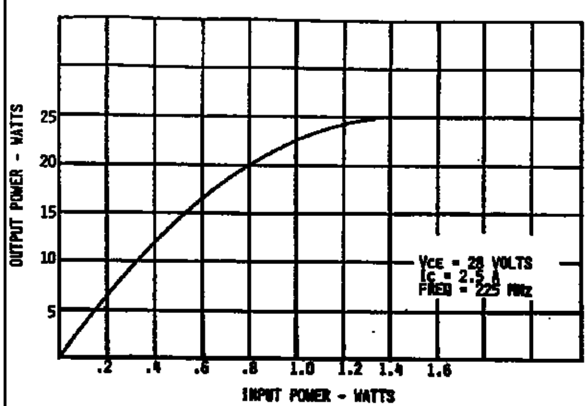
DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	f = 225 MHz	V_{CE} = 28 V	I_C = 2.5 A	14	—	—	W
G_P	f = 225 MHz	V_{CE} = 28 V	I_C = 2.5 A	14	—	—	dB
IMD_3	f = 225 MHz	V_{CE} = 28 V	I_C = 2.5 A	—	—	–55	dBc
C_{OB}	f = 1 MHz	V_{CB} = 28 V		—	—	80	pF

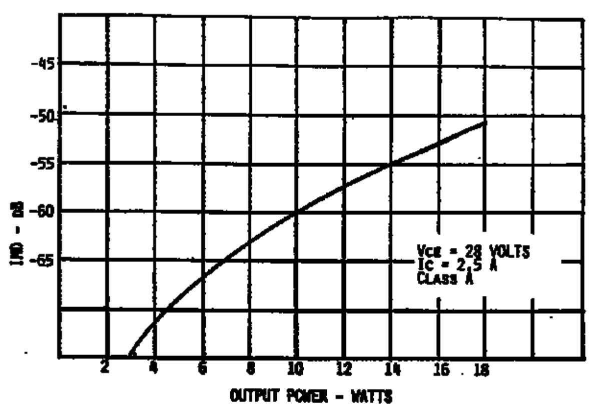
Note: IMD_3
- Vision Carrier - 8dB
- Sound Carrier - 7dB
- Sideband Carrier - 16dB

TYPICAL PERFORMANCE

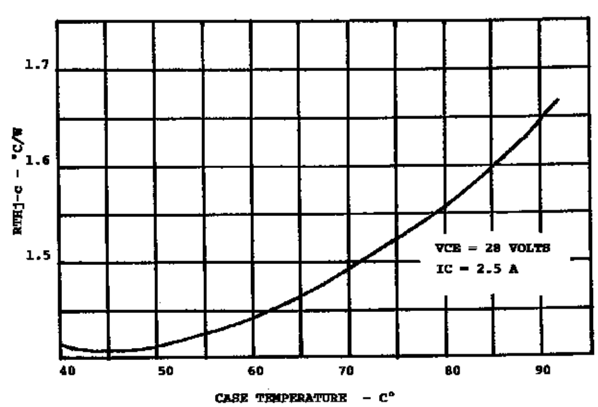
POWER OUTPUT vs POWER INPUT



IMD vs POWER OUTPUT

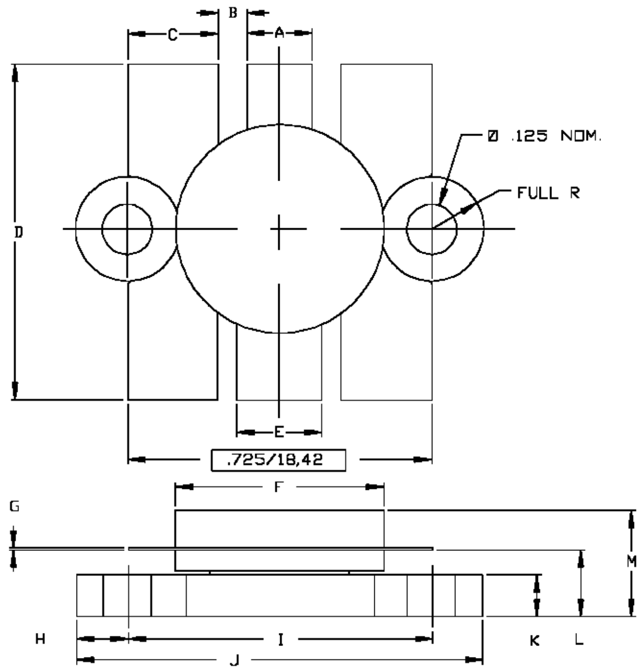


THERMAL RESISTANCE vs CASE TEMPERATURE



PACKAGE MECHANICAL DATA

Ref.: Dwg. No.12-0111



SGS-THOMSON MICROELECTRONICS		
	MINIMUM Inches/mm	MAXIMUM Inches/mm
A	.150/3,43	.160/4,06
B	.045/1,14	
C	.210/5,33	.220/5,59
D	.835/21,21	.865/21,97
E	.200/5,08	.210/5,33
F	.490/12,45	.510/12,95
G	.003/0,08	.007/0,18
H	.125/3,18	
I	.720/18,29	.730/18,54
J	.970/24,64	.980/24,89

CONT'D		
	MINIMUM Inches/mm	MAXIMUM Inches/mm
K	.095/2,41	.105/2,67
L	.150/3,81	.170/4,32
M		.280/7,11